

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

1. (Once Amended) An array comprising at least one pattern of probe oligonucleotide spots stably associated with the surface of a solid support, wherein each probe oligonucleotide spot of said pattern ~~corresponds to a target nucleic acid and~~ comprises an oligonucleotide probe composition made up of long oligonucleotide probes that range in length from about 50 to 120 ~~nt~~ nucleotides.

3. (Once Amended) The array according to Claim 2, wherein each probe oligonucleotide spot in said pattern ~~corresponds~~ hybridizes to a different target nucleic acid.

Cancel Claim 4.

Cancel Claim 5.

Cancel Claim 6.

10. (Once Amended) The array according to Claim 1, wherein the ~~density of spots on~~ said array ~~does~~ do not exceed a density of about 1000/cm².

11. (Once Amended) The array according to Claim 10, wherein the ~~density of spots on~~ said array ~~does~~ do not exceed a density of about 400/cm².

12. (Once Amended) The array according to Claim 1, wherein the ~~number of spots on~~ said array ~~ranges~~ range from about 50 to 50,000 in number.

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13. (Once Amended) The array according to Claim 1, wherein the ~~number of spots on~~ said array ~~ranges~~ range from about 50 to 10,000 in number.

14. (Once Amended) An array comprising a pattern of probe oligonucleotide spots covalently bound to the surface of a solid support, wherein each probe oligonucleotide spot ~~corresponds to a target nucleic acid and~~ comprises a long oligonucleotide probe composition made up of long oligonucleotides of from about 60 to 100 ~~nt~~ nucleotides in length, ~~wherein each of said long oligonucleotide probes exhibits substantially the same high hybridization efficiency with its respective target and low level of non-specific hybridization.~~

16. (Once Amended) The array according to Claim 15, wherein each probe oligonucleotide spot in said pattern ~~corresponds~~ hybridizes to a different target nucleic acid.

17. (Once Amended) The array according to Claim 15, wherein two or more probe oligonucleotide spots in said pattern ~~correspond~~ hybridize to the same target nucleic acid.

18. (Once Amended) The array according to Claim 14, wherein ~~the length of each of~~ said unique oligonucleotides ranges from about 65 to 90 nucleotides in length.

19. (Once Amended) The array according to Claim 14, wherein the ~~density of spots on~~ said array ~~does~~ do not exceed a density of about 1000/cm².

20. (Once Amended) The array according to Claim 14, wherein the ~~density of spots on~~ said array ~~does~~ do not exceed a density of about 400/cm².

21. (Once Amended) The array according to Claim 14, wherein the ~~number of spots on~~ said array ~~ranges~~ range from about 50 to 50,000 in number.

22. (Once Amended) The array according to Claim 14, wherein the ~~number of~~ spots on said array ~~ranges~~ range from about 50 to 10,000 in number.

23. (Once Amended) An array comprising a pattern of probe oligonucleotide spots of a density that does not exceed about 400 spots/cm² covalently attached to the surface of a glass support, wherein each probe oligonucleotide spot ~~corresponds to a different target nucleic acid~~ and comprises an oligonucleotide probe composition made up of long oligonucleotides of from about 65 to 90 nt nucleotides in length, ~~wherein each of said long oligonucleotides has substantially the same high hybridization efficiency for its corresponding target and the substantially the same low level of non-specific hybridization.~~

Please add the following new claims:

--36. The array according to Claim 1, wherein any variance in hybridization efficiency among any to probes of said array does not exceed about 10-fold.

37. The array according to Claim 14, wherein any variance in hybridization efficiency among any to probes of said array does not exceed about 10-fold.

38. The array according to Claim 23, wherein any variance in hybridization efficiency among any to probes of said array does not exceed about 10-fold. --

IN THE SPECIFICATION

Please replace the paragraph beginning on page 41, line 1, with the following rewritten paragraph:

TABLE 1

| Array Position | Probe Name | Probe Sequence |
|----------------|------------|--|
| A1 | s64_2 | AC CTAGAAAGCT ATTGAGCTG GATCCGTCC TCTGATCGT AGCCCTTCT TGAAGAAATT CGGACATCTC TGCCAAAGTC TTGTGACCTG TAGCTGCCA (SEQ ID NO:3) |
| A2 | s64_2_90 | AGAAAGCTATTTGAGCTGGATCGTCCCTCTGATCGTGACGCCCTTCCCTTGAAGAAATTTCCGACATCTCTGCCAAAGTCTTGTGACCTGTA (SEQ ID NO:4) |
| A3 | s64_2_80 | AGCTATTTGAGCTGGATCGTCCCTCTGATCGTGACGCCCTTCCCTTGAAGAAATTTCCGACATCTCTGCCAAAGTCTTGTGA (SEQ ID NO:5) |
| A4 | s64_2_70 | ATTGAGCTGGATCCGCTCTGATCGTGACGCCCTTCCCTTGAAGAAATTTCCGACATCTCTGCCAAAGTA (SEQ ID NO:6) |
| B1 | s64_2_60 | AGCTGGATCCGCTCCCTCTGATCGTGACGCCCTTCCCTTGAAGAAATTTCCGACATCTCTGCCA (SEQ ID NO:7) |
| B2 | s64_2_50 | AATCCGTCCTCTGATCGTGACGCCCTTCCCTTGAAGAAATTTCCGACATCTA (SEQ ID NO:8) |
| C1 | s26_2 | AAACCCAGGA AAATACCAA TCCAGATTTC TTGAAGATC TGAACCTTT CAGAAATGACT CCTTTAGTG CTAATGGTTT GGAGCTGTGG TCCATGACCTA (SEQ ID NO:9) |
| C2 | s26_2_90 | AGGAAATACCAAATCCAGATTTC TTGAAGATCTGGAACCTTT CAGAAATGACTCCTTTTAGTGCTATTGGTTTGGAGCTGTGGTCCATA (SEQ ID NO:10) |
| C3 | s26_2_80 | AATACCAAATCCAGATTTC TTGAAGATCTGGAACCTTT CAGAAATGACTCCTTTTAGTGCTATTGGTTTGGAGCTGTGGA (SEQ ID NO:11) |
| C4 | s26_2_70 | AAATCCAGATTTC TTGAAGATCTGGAACCTTT CAGAAATGACTCCTTTTAGTGCTATTGGTTTGGAGCA (SEQ ID NO:12) |
| D1 | s26_2_60 | ACAGATTTC TTGAAGATCTGGAACCTTT CAGAAATGACTCCTTTTAGTGCTATTGGTTTA (SEQ ID NO:13) |
| D2 | s26_2_50 | ATTCTTTGAAGATCTGGAACCTTT CAGAAATGACTCCTTTTAGTGCTATTA (SEQ ID NO:14) |
| A5 and E5 | c370_2 | AGGGTC AGCTGATCTA CGAGTCTGCC ATCACCTGTG ASTACCTGGA TGAAGCATAC CCAGGGAAGA AGCTGTGCC GGATGACCCC TATGAGAAAG CTTGCA (SEQ ID NO:15) |
| A6 and E6 | c370_2_90 | AGCTGATCTACGAGTCTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTCCGGATGACCCCCTATGAGAAA (SEQ ID NO:16) |
| A7 and E7 | c370_2_80 | AATCTACGAGTCTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTCCCGATGACCCCTATA (SEQ ID NO:17) |
| A8 and E8 | c370_2_70 | ACGAGTCTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTCCCGATGACCA (SEQ ID NO:18) |
| B5 and F5 | c370_2_60 | ACTGCCATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTGCCGGAA (SEQ ID NO:19) |
| B6 and F6 | c370_2_50 | AATCACCTGTGAGTACCTGGATGAAGCATACCCAGGGAAGAAGCTGTTGA (SEQ ID NO:20) |

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| G1 | s91 3 | AGGCCCAAT GGCTGGAAT CTCGCTATT TAGGCATTCT ACTCAGAAAA ACCTTAAAA TTCACAAATG TGTCAAGA GCCTTGATGT GGAACCGATA (SEQ ID NO:21) |
| G2 | s91_3_90 | ACAAATGGCTGGAATCTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAAGAGCCCTTGATGTGGAA (SEQ ID NO:22) |
| G3 | s91 3 80 | AGGCTGGAATCTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAAGAGCCCTTGATA (SEQ ID NO:23) |
| G4 | s91 3 70 | AGAAATCTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAAGAGCCCA (SEQ ID NO:24) |

Please replace the paragraph beginning on page 42, line 1, with the following rewritten paragraph:

| | | |
|-----------|----------|--|
| H1 | s91 3 60 | ACTCGCCTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTCAGAAA (SEQ ID NO:25) |
| H2 | s91 3 50 | ACTATTTAGGCATTCTACTCAGAAAAACCTTAAAAATTCACAAATGTGTA (SEQ ID NO:26) |
| E1 | s97 4 | ATAGGAGGGG TGAAGCCCGAG CTGCTCATGA ACGAGTTTGA GTCAGCCCAAG GGTGACTTTG AGAAAGTGCT GGAAGTAAAC CCCCAGATA AGGCTGCAAGA (SEQ ID NO:27) |
| E2 | s97_4_90 | AGGGGTGAAGCCCGAGCTGCTCATGAACGAGTTTGAGTCAGCCAGGGTGACTTTTGAGAAAGTGCTGGAAGTAAACCCCGAGATAAGGCA (SEQ ID NO:28) |
| E3 | s97 4 80 | AGAAAGCCCGAGCTGCTCATGAACGAGTTTGAGTCAAGCCAGGGTGACTTTTGAGAAAGTGCTGGAAGTAAACCCCGAGAATA (SEQ ID NO:29) |
| E4 | s97 4 70 | ACCAAGCTGCTCATGAACGAGTTTGAGTCAGCCAGGGTGACTTTTGAGAAAGTGCTGGAAGTAAACCCCGCA (SEQ ID NO:30) |
| F1 | s97 4 60 | ATGCTCATGAACGAGTTTGAGTCAGCCAGGGTGACTTTTGAGAAAGTGCTGGAAGTAAAC (SEQ ID NO:31) |
| F2 | s97 4 50 | AATGAACGAGTTTGAGTCAGCCAGGGTGACTTTTGAGAAAGTGCTGGAAGTAAAC (SEQ ID NO:32) |
| C5 | s74 3 | ATATGT AACTGAAGAA GGTGACAGTC CTTTGGGTGA CCATGTGGGT TCTCTGTCAG AGAAATTAGC AGCAGTCGTC AATAACCTAA ATACTGGCA AGTGTA (SEQ ID NO:33) |
| C6 | s74_3_90 | AAACTGAAGAAAGGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTAAATACTGGGA (SEQ ID NO:34) |
| C7 | s74 3 80 | AAAGAAAGGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTAAATAA (SEQ ID NO:35) |
| C8 | s74 3 70 | AAGTGACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATAACCTA (SEQ ID NO:36) |
| D5 | s74 3 60 | ACAGTCCTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGTCAATA (SEQ ID NO:37) |
| D6 | s74 3 50 | ACTTTGGGTGACCATGTGGGTTCTCTGTCAGAGAAATTAGCAGCAGTCGA (SEQ ID NO:38) |

TABLE 1 (CONT)